Remarks

Claims 1-39 are in the application. Claims 1-5, 20-37, and 39 are allowed. Claims 9-19 are objected to as being dependent on a rejected base claims but would be allowable if rewritten into independent form to include all of the limitation of the base claims and any intervening claims. Applicants acknowledge with thanks the allowances and the indication of allowable subject matter.

Claims 6-8 stand rejected under 35 USC 102(e) over published patent application US2002/0109090 by Nakasuji et al. ("Nakasuji"). Nakasuji was filed in the US on Nov. 2, 2001, claiming priority directly from three Japanese applications. Nakasuji does not derive priority from an international application filed under the Patent Cooperation Treaty. Applicants submit that the 102(e) prior art date of Nakasuji is the US filing date, not the Japanese priority date. According to the Office's "Examination Guidelines for 35 U.S.C. § 102(e)," Section IV)(4)(d), page 9, http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/102eog121102.pdf :

> "Foreign applications' filing dates that are claimed (via 35 U.S.C. §§ 119(a)-(d) or 365(a)) in applications, which have been published as U.S. or WIPO application publications or patented in the U.S., may not be used as § 102(e) dates for prior art purposes. This would include international filing dates claimed as foreign priority dates under 35 U.S.C. § 365(a)."

Applicants claim priority from US Prov. Pat. App. 60/270,799, filed Feb. 23, 2001. Applicants submit that claims 6-8 are entitled to the provisional filing date of Feb. 23, 2001 and that Nakasuji, with a 102(e) date of Nov. 2, 2001 is not prior art to the present application. Applicants request, therefore, that the rejection be withdrawn.

Claim 38 stands rejected under 35 USC 102(b) as being anticipated by U.S. Pat. No. 5,502,306 to Meisburger et al. ("Meisburger"). Applicants respond as follows. The wording of claim 38 is rearranged to clarify, to reduce redundancy, and to recite that the primary electron beam is focused.

The Examiner states that Meisburger teaches finely focusing an electron column (col. 16, line 49) and applying a relatively small voltage to a deflector positioned above the objective lens (col. 8, lines 12, col. 9, line 5).

Meisburger teaches that: "Electron beam 100 is focused by varying the current in the system's objective lens 104." Col. 16, lines 49-50. Meisburger further teaches optimizing the focus in col. 16, lines 50 to col. 17, lines 12, but nowhere does he mention a means for focusing other than varying the current in the system's magnetic objective lens. Meisburger does not teach a method of fine focusing the primary beam by "applying a relatively small voltage to the deflectors that are positioned above the objective lens."

Meisburger teaches characterizing a specimen, typically a photolithography mask, by collecting either secondary charged particles, backscattered charged particles, or transmitted charged particles, the charged particles being generated as the primary beam is scanned over the specimen. Col. 1, lines 56-58. Meisburger teaches biasing intermediate electrode 107 within the lens 104 (not deflectors 112 above lens 104) relative to the stage to "to accelerate the electrons as soon as they leave the mask and to aid in the collection of secondary electrons that emanated from depressed areas on the substrate." Col. 8, lines 19-22. Thus Meisburger does not teach applying a voltage to the deflectors 112 to finely focus the primary electron beam, but in those paragraphs, teaches biasing the intermediate electrode to enhance collection of secondary particle.

Meisburger does teach applying a voltage to deflector 112 to form, together with magnetic deflector 113 a Wien filter to deflect secondary particles to a detector away from the primary beam axis. Col. 9, lines 27-42. The Wien filter deflects the secondary electrons into a detector "without substantially influencing the higher energy scanning beam 100." Col. 9, lines 29-30. Thus, the voltage applied by Meisburger doe not focus the primary electron beam.

A Wien filter comprises an electric field that tends to accelerate electrons in one direction transverse to the beam axis and a magnetic field that tends to accelerate electrons in the opposite direction transverse to the beam axis. Because the magnetic force depends on the velocity, electrons having the desired energy (in this case, electrons in the primary electron beam) pass through the Wien filter undeflected, while electrons having different energies, such as the secondary electrons, are deflected away from the axis. Because the electric field in a Wien filter is transverse to the axis of the particle beam, it is a deflecting field, not a focusing, field. Thus, applicants submit that Meisburger does not teach fine focusing the primary beam by "applying a relatively small voltage to the deflectors that are positioned above the objective lens."

Applicant submits that the application is in condition for allowance and respectfully request that the application be reconsidered and allowed.

Respectfully submitted,

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